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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/758,573	01/10/2001	Kendyl A. Roman		9422

7590 01/20/2006

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EXAMINER	
TUNG, KEE M	

ART UNIT	PAPER NUMBER
2671	

DATE MAILED: 01/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/758,573	ROMAN, KENDYL A.	
	Examiner	Art Unit	
	Kee M. Tung	2671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 February 2005 and 10 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9 and 11-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9 and 11-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

The RCE and response filed 2/16/05 and 5/10/05 have been considered in preparing this Office action.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 5-9, 11-18, 22, 23, 26, 27 and 30-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al (5,696,940 hereinafter "Lin") in view of Bowes et al (5,828,856 hereinafter "Bowes").

Lin teaches a method of increasing image processing performance by explicitly copying a first instance (The words "first instance" can be broadly interpolated as just the first data being copy/transfer from I/O memory to the main memory) of an image data (the input data from the I/O device 22 can be a video camera for capturing an image, a video monitor, printer, network port, etc, see col. 2, lines 40-41) between a buffer (not shown, but would have been obvious to include as suggested by Bowes in order to temporarily store the data before it is written to its destination, see col. 1, line 63 to col. 2, line 4) in main memory (Fig. 1, main memory 14) and an I/O memory (RAM 20; it is noted that Lin does not particularly called the RAM 20 an I/O RAM, however, the RAM 20 is used for storing the input data from the I/O device 22 before transfer/copy into the main memory 14 and thus can be called an I/O RAM, see col. 1, lines 18-21.

Lin further teaches a FIFO buffer within the RAM 20 to store the input data from the I/O device 22) by a DMA circuitry (18) that controls data transfers between the main memory (14) and I/O RAM (20). Lin further teaches a CPU (12, it is noted that any CPU made or on the market at the time of this invention at least includes the functionality of performing any kind of basic "CPU intensive operations" for a PC or any well known "host computer") can read data from main memory (14) and write the processed result into the main memory 14. However, Lin fails to explicitly suggest or teach a buffer in the main memory (14). This is what Bowes teaches (col. 1, lines 63 to col. 2, line 4). It would have been obvious to one of ordinary skill in the art at the time the present invention was made to combine the teachings of a buffer in the main memory of Bowes into the system of Lin because Bowes **explicitly** teaches or suggests that a buffer in the main memory is considered a conventional option in order to be act as either an intermediary between the system bus and the particular I/O device, or may temporarily store the data before it is written to its destination as taught by Bowes (col. 1, line 63 to col. 2, line 4). Therefore, at least claims 1, 5, 12-18, 22, 23, 26, 27 and 30 would have been obvious.

As per claim 11, Lin fails to explicitly teach said I/O RAM is associated with a video digitizer. However, if the I/O device 22 is a video camera, a video digitizer would have been obvious to include if not inherent to in order to digitize the captured image.

As per claims 6-9 and 31-34, the combined system fails to explicitly teach how the image data is being copy/transfer. It would have been obvious to one of ordinary skill in the art at the time the present invention was made to modify or implement the

teachings of DMA functions of Lin in order to add the flexibility to the system by providing different copy/transfer functions or options. Therefore, at least claims 6-9 and 31-34 would have been obvious.

3. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al (5,696,940 hereinafter "Lin") in view of Bowes et al (5,828,856 hereinafter "Bowes") as applied to claim 1 above, and further in view of Anderson et al (6,338,119 hereinafter "Anderson").

The teachings of Lin and Bowes are given in previous paragraph of this Office action. However, the combined system fails to explicitly teach a L1 and L2 cache memory. It was old and well known and well used in the art to include a L1 and a L2 cache memory in order to speed up the system processing by access data locally from the cache instead of main memory. Furthermore, Anderson teaches a L1 (Fig. 1, 104) and L2 (106) cache memory. It would have been obvious to one of ordinary skill in the art at the time the present invention was made to combine the teachings of Wada or Anderson into the combined system of Lin and Bowes in order to provide fast access to the storage device and thus improves the overall system performance because a cache is a much faster storage device than any other RAM for the CPU or other computation device. Therefore, at least claims 2-4 would have been obvious.

4. Claims 19–21, 24, 25, 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al (5,696,940 hereinafter "Lin") in view of Bowes et al (5,828,856 hereinafter "Bowes") as applied to claim 16 above, and further in view of Cullen et al (6,592,629 hereinafter "Cullen").

The teachings of Lin and Bowes are given in previous paragraph of this Office action. However, the combined system fails to explicitly teach said processor executes programs to enhance, compress/decompress, encrypt/decrypt, or reformat said image data. These are what Cullen teaches. Cullen teaches remote document image storage and retrieval system for a multifunctional peripheral comprising a workstation (630) and a multifunction machine (140) includes a compress/decompress (252), an encrypt (253) and decrypt (254). It would have been obvious to one of ordinary skill in the art at the time the present invention was made to combine the teachings of Cullen into the combined system of Lin and Bowes in order to reduce overall storage space and provide fast and secure transmitted over the bus or network as taught by Cullen (col. 5, lines 16-63). Therefore, at least claims 19, 20, 24, 25, 28 and 29 would have been obvious.

Claim 21 is similar in scope to the combination of claims 1, 11, 12 and 19-20, and thus is rejected under similar rationale.

Response to Arguments

5. Applicant's arguments filed 2/16/05 have been fully considered but they are not persuasive.

The rejections have been modified in order to fully considered applicant's arguments.

Regarding to Anderson, applicant again argues that the Office action fails to cite any specific figure or specification text where the Office action also clearly cited element

numbers 104 and 106. If applicant read the prior art, it is very clear that 104 and 106 are in figure 1 of the drawing.

Regarding to Cullen, applicant argues that Cullen does not teach the specifics of CPU processing of an image in memory or an I/O RAM. Well, again the examiner reliance on Cullen to show that compression/decompression, encryption and decryption are well known and well used in the art for storage or transmission over the network or bus. For example, for storage, it saves memory space by compressed the data. For transmission, compressed data saves memory bandwidth and shorter transmission time. For encryption and decryption, that provides security to the data. And all those features are well known and well used in the art and also add no burden to any one of ordinary skill in the art to add the features into any system without these functions.

Regarding combination of the prior art references, applicant argues that the prior art fails to explicitly suggest they be combined. Well, the examiner clearly shows the motivations and reasons how all these prior art references can be combined together in the detail rejections.

Therefore, all the arguments have been addressed and for the reasons set forth above, applicant's arguments are not deemed to be persuasive.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kee M. Tung whose telephone number is 571-272-7794. The examiner can normally be reached on Tuesday - Friday from 5:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on 571-272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kee M Tung
Primary Examiner
Art Unit 2671